University of Alberta

A Competence Assurance Framework for the Dietetics Profession

by

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in partial fulfillment of the
requirements for the degree of
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **A Competence Assurance Framework for the Dietetics Profession** submitted by Holly Esther Knight in partial fulfillment of the requirements for the degree of Master of Education in Adult and Higher Education.

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DEDICATION

This work is dedicated to my family:

- to my husband Don, and to my children Robyn and Ryan, who offered love and support, and put up with me while I endeavored to complete my studies, and
- to my parents, who instilled in me the value of education and learning.

ABSTRACT

Professional regulatory bodies are under increasing pressure to demonstrate ongoing competence of their members. This is particularly so in provinces in Canada such as Alberta where new omnibus health profession legislation is being considered. This is the challenge being faced by the Alberta Registered Dietitians Association. Therefore, the problem addressed by this study was "how can ongoing competence be assured in dietetics?" This qualitative study explored the competence frameworks in use by a number of Alberta based professional regulatory bodies, identifying various components within these models. Data were collected by means of a series of eight interviews with professional regulatory bodies both within and outside of the health sector. In addition, information regarding existing competence frameworks was gathered from other professional regulatory bodies and the literature in order to broaden understanding of the components of these frameworks. A review of topics such as self-assessment, continuing education reporting, peer review, learning portfolios, mentoring, and certification examinations are discussed within the context of adult education theory. Competence frameworks from Alberta based professional regulatory bodies were found to incorporate several components, including professional standards, certification examinations, provision of continuing education opportunities, and monitoring of ongoing competence. Mechanisms in use to monitor ongoing member competence included professional development reporting, self-assessment, peer review, client-driven assessment, practice audit/review, and use of learning portfolios. Findings are synthesized into a proposed competence assurance framework. This framework identifies essential components that could be adapted by self-regulated health professions

being faced with the need to demonstrate ongoing member competence. Implementation of this competence framework is recommended for the Alberta Registered Dietitians Association as a means to assure ongoing professional competence of its members.

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CHAPTER ONE

INTRODUCTION AND STATEMENT OF THE PROBLEM

Background

No longer can professional associations assume that the level of competence assessed when an individual was registered upon admission to the association is reflective of continuous competence. The fact that an individual was certified as competent at some point in the past has no bearing on whether he or she is currently competent to practice. This is particularly so in fields such as nutrition, where scientific advancements are occurring at an ever-quickening pace. This is the dilemma which is being faced by the Alberta Registered Dietitians Association (ARDA). As a regulatory body, ARDA is obliged to review and confirm on a regular basis the competence level of its membership.

Health professions in the province of Alberta are awaiting the passing of the proposed Health Professions Act through the Alberta legislature, anticipated to occur sometime during the spring 1999 sitting. (Health Professions Act Implementation Steering Committee, 1997). This Act will delineate the obligations of the professional association in regulating its membership, mainly towards the end of protection of the public from incompetent and unethical practice. This has been the mandate of this new Act since its inception. One of the objectives of the Health Workforce Rebalancing Committee was to "propose a method of regulating health service providers that will protect the public through affordable and appropriate standards." (Health Workforce Rebalancing Committee, 1995).

In anticipation of this pending legislation, professional associations at the provincial level are forming formal colleges, with clear mandate and direction in terms of

their purpose. For example, the Alberta Registered Dietitians Association has discontinued membership services, relinquishing these functions to a national group, Dietitians of Canada, and will focus instead upon regulatory processes, which include registration, competence review, discipline, and other such similar functions. Other groups may opt to retain membership services under the professional association umbrella, but will also be expected to perform regulatory functions.

Given the present state of affairs within health, professional associations are being faced with similar pressures to determine membership competence in order that practice is regulated. As such, professional associations have been looking at frameworks to assess on an ongoing basis how competent members are in their particular practice settings. This study will look at various Alberta professional associations, evaluating how they have approached this issue. Recommendations arising from this study will attempt to provide a framework for professional dietitians in Alberta within which ongoing membership competence can be assured.

Research Problem

The problem addressed by this study is, "how can ongoing professional competence be assured in dietetics?"

Sub-problems

Sub-problems include:

a) What mechanisms are in place within the existing competence frameworks of professional regulatory bodies to evaluate ongoing professional competence?

b) What competence frameworks do professional regulatory bodies have in place to assure ongoing professional competence?

c) How can competence frameworks and mechanisms in use by professional regulatory bodies be adapted to meet the needs of assuring ongoing professional competence of registered dietitians?

Researcher Assumptions and Beliefs

Professional associations, as part of their obligation to self regulate, are compelled to critically evaluate membership competence on an ongoing basis, and not assume that continued competence is a function of the level of competence at point of entry into the profession. This research is also based on the assumption that competence programs are in existence in a number of professions, and that these can be adapted to effectively assure ongoing professional competence in other professions.

Definition of Terms

Several terms in this work require clarification. Their definitions, as applicable to this particular research study, are provided as follows:

Ongoing professional competence. *Ongoing professional competence* is the assurance that a designated professional is able to demonstrate, on an ongoing basis and within the scope of their practice, that they are able to complete their expected work to the standards that are outlined by their regulatory body.

Profession. *A profession,* as defined by Farmer (1974) is an occupational organization which would result if it became completely professionalized. Flexner's definition (1915), cited in Brown (1984) of a profession identifies nine dominant traits: autonomy, the professional association, self-regulation, possession of a unique body of intellectual knowledge, the use of research to augment this knowledge, specialized training required to gain this complex knowledge, based on altruism, (to represent a life work to which one

is "called"), to involve a unique relationship between practitioner and client built on a code of ethics.

Professional association. *A professional association* is a group of individuals who have been credentialed to practice within their given profession. Professional associations within the province of Alberta are delegated the right to self-regulate under legislation. Farmer (1974) refers to a professional group as "a term which can be used to refer to associations of colleagues in an organizational context where it has been observed that a relatively high degree of professionalism has taken place". Professional associations may offer membership services in addition to acting as the regulatory body for a given profession. As a regulatory body, specific regulations would be set in place under legislation determining requirements of registration and discipline. With the proposed Health Professions Act, this would also include assurance of ongoing professional competence of members. Because of the shift in focus of professional associations that will occur as a result of this Act, and the focus of this study on the regulatory side of associations, I will refer to "professional regulatory bodies" for the remainder of this study.

Competence Framework. *A competence framework* would encompass essential components established by a professional regulatory body to assure member competence.

Mechanism. *A mechanism* would refer to a means being utilized by a professional regulatory body to assess member competence.

Registered dietitians. *Registered dietitians* are individuals who have the necessary qualifications to be a member of the Alberta Registered Dietitians Association. Normally qualifications consist of completion of a Bachelor of Science Degree (or equivalent) with

major credits in Nutrition, Dietetics and/or Foodservice Administration plus successful completion of a program of supervised practical experience accredited by Dietitians of Canada (Dietitians of Canada, 1999).

Limitations

1. Techniques for data collection included the use of semi-structured interviews. Because of this interview methodology, a question design limitation of the researcher as interviewer was possible. One pilot session was held to reduce the design of the question limitation.
2. Although the study sample was intended to be Alberta based, some professional regulatory bodies have formed national alliances as part of their strategy to address the issue of ongoing membership competence, in addition to other issues such as national standards and transferability of members between provinces (labour mobility). As such, information about professional regulatory bodies which were outside of the study sample was collected by means of telephone contact, electronic mail, and fax media. Responses therefore may have been limited by the communications media in use.
3. The study sample is based on referrals to individuals involved in professional practice or quality assurance activities of professional regulatory bodies.

Delimitations

1. This study did not address competence issues in non self-governed regulatory bodies. Only groups with professional designations were approached.

2. Permission was requested from professional regulatory bodies and their officers to participate in the study. Only organizations which agreed to participate, and which identified a contact person, were included in the study.

Significance of the Proposed Research

Significance of this particular research could be found for several groups. Firstly, professional regulatory bodies that are developing competence programs would find this research significant to their situation. Application might also be found for organizations which plan and develop continuing education for professional groups, and for curriculum development at the undergraduate and postgraduate practicum levels prior to entrance into the profession (establishing in pre-service the expectation of continuous learning and self-assessment). Finally, employers might find this study of significance--in linking individual competence to professional regulatory bodies, in understanding the professional practice structure, and in operationalizing the overall competence framework.

Organization of the Thesis

This study attempted to examine the issue of ongoing professional competence in as comprehensive a manner as possible. A literature review was conducted which looked at competence from a number of perspectives, starting with the core definitions of the concept of competence, and why competence is important within the context of the professional regulatory body. The research further traveled into the components and mechanisms of ongoing competence frameworks that are in place within professional regulatory bodies in an effort to assure ongoing professional competence.

Chapter Three describes the design of the study, and the methodology used in interviews with eight different professional regulatory bodies. As well, information was gathered from several additional regulatory bodies to broaden understanding of the components of existing ongoing competence frameworks.

The results of the regulatory body interviews were analyzed to evaluate the mechanisms and other components of competence frameworks in place. These results were contrasted with findings in the literature. Finally, conclusions and recommendations included a proposed framework for assuring ongoing professional competence for registered dietitians in Alberta. This structure is supported by selected core principles of adult education theory.

CHAPTER TWO

REVIEW OF THE LITERATURE

Overview

This review will delve into the significance of ongoing competence within the health professions, and particularly within dietetics, outlining some of the specific issues being faced by professions attempting to assure member competence. Definitions of competence will be explored, as well as components of competence frameworks that have been used by different organizations in their quest to evaluate member competence. Some of these components include licensure examinations, continuing education reporting, self assessment, mentoring, peer review, and the use of learning portfolios. Competence framework components in use will be profiled against some of the fundamental theory found in the adult education literature. This will frame some of the preliminary assumptions that will be carried through into the data analysis and discussion/recommendations component of this work.

Definition of Competence

First of all, why is competence important? As previously established (identified in Chapter One), professional regulatory bodies in Alberta are being mandated by proposed legislation to demonstrate ongoing professional competence of their memberships. Alberta health professions in particular will be mandated to demonstrate membership competence under proposed legislation, the Health Professions Act. This proposed Act is based on the principle that the government, professional associations, and regulatory bodies have a responsibility to protect the public by ensuring appropriate

standards. As stated by the Health Workforce Rebalancing Committee (1995), "the Act also provides for enhanced accountability and responsiveness".

> There will be an increased emphasis on professions maintaining and improving their competence. It will not be acceptable for a professional to meet the initial requirements for entry into practice and to continue practicing without demonstrating that they are maintaining currency in the practice of that profession. Within five years each regulatory college must develop in regulation a continuing competency program for its members. (Government Bills and Orders, 1998).

Although professional regulatory bodies re-certify qualified members on a regular pre-established basis, they do not all necessarily monitor ongoing competence of these members. Under the proposed Health Professions Act, this re-certification would be tied to a need to demonstrate ongoing professional competence of these members. Initial certification assures competence of individual practitioners at entry level into practice (Gilley & Galbraith, 1986). Studies have demonstrated evidence for the predictive validity of written examinations as a component of the initial certification process (Ramsey, Carline, Inui, Larson, LoGerfo, & Wenrich, 1989). However, initial competence is not in question here.

Houle (1980, p. 289) asserts that quality assurance systems are required throughout professional life. "Beyond the initial threshold of competence lie all the specific requirements that must be met in a lifetime of practice as professionals advance through their careers."

Before one can consider how to assess competence, one must define competence. Several sources have provided definitions for the term "competence". Similarities exist within these definitions. Nagelsmith (1995), in her review of the concept of competence, identified competence within several contexts, including its use as an outcome criterion

for education. She cited a definition of competence provided by Butler (1978) as "the ability to meet or surpass prevailing standards of adequacy for a particular activity". She also identified the need to consider more than just knowledge and skill in considering practitioner competence, but also the concepts of critical thinking, judgment, attitude formation, and values. This is consistent with definitions put forward by others. The College of Physicians and Surgeons of Alberta (1998) provided a simple definition of competence, but with the same basic elements: "competence refers to a high standard of knowledge, skills, and performance, and to the provision of services in creditable facilities."

Percival, Anderson & Lawson (1994) defined competence as "the knowledge, skills, values, beliefs, and attitudes that reflect and underpin the practice of the nurse, and therefore, requires measurement in the practice context." (p. 139). They extended this definition into the practice setting: "Competence is the ability of a person to fulfill the nursing role effectively and/or expertly. It is an inner, highly differentiated characteristic of a person which is applicable to the very demanding and very specific context of nursing...possesses a complexity that increases with experience" (p. 139). Benner (1982) provided a simple definition of competence (304) being "the ability to perform the task with desirable outcomes under the varied circumstances of the real world". She also warned of the complexity of measuring competence, particularly in advanced practice, "practice in any helping profession is more complex than current test methodology can evaluate." (p. 309).

Another particularly good definition of competence which considers competence within the context of the professional occupational setting was cited by Bedford, Phillips,

Robinson & Schostak (1993): "competence is seen as a repertoire of competencies which allows the practitioner to practice safely" (p. 15). These authors also discussed competence as being along a continuum, with there not necessarily being a linear progression from one level of the continuum to another, and raised the possibility also of backward motion.(39, 40). "Competence is, therefore, a concept which is worked out and continually reformulated through work itself. Assessment needs to take account of all these complexities."

Friedman & Marr (1995) also identified competence as being on a continuum, ranging from what they termed Level One, the newly qualified practitioner, through Level Two (the professional practitioner), and Level Three (the experienced practitioner), to Level Four (the specialist practitioner).

While Earley (1993) identified competence as "the ability to perform work activities to the standards or expectations required in employment. Standards are expressed as outcomes and provide benchmarks or specifications against which competence performance can be assessed".

Parry (1996) also discussed work performance, noting that competencies displayed by employees relate to how their work meets or exceeds prescribed standards, and that this correlates with job performance (49-50).

Identification of competencies and an assessment framework were created by Bujack, McMillan, Dwyer & Hazelton (1991), in their study of clinical performance measures. Their study, however, dealt specifically with entry-level competencies, and did not address the issue of measurement of ongoing competence. Coates and Chambers (1992) also looked at assessment of clinical skills in the nursing context, identifying that

a standard of expertise was necessary in order to protect the public, but studied competence early in professional life, focusing on nursing students.

Bates (1992) added a practical bend to the definition of competence, implying that real competence is required to further professional development, and advocated a competency based system in which performance can be broken down into basic skills. Des Roches (1996) built upon this, stating that "competence includes a knowledge component that deals with facts, awareness of issues and the necessary background to act. It also consists of a performance component that includes the appropriate application and use of knowledge in the practice setting." (Jan/Feb 1996, p.11). Standards of practice are applicable to advanced level positions as well. For example, Feitelson Winkler (1993) discussed standards of practice for the nutrition support dietitian, which is an advanced practice type position.

One must also appreciate that competence is not a static entity. Des Roches (Jan/Feb1996) said it well: "it is generally accepted that competence will diminish over time unless it is used, updated, or reinforced." (p. 11). This is also supported by the College of Nurses of Ontario (1997): "definition of competence recognizes that competence is dynamic...there are many attributes other than knowledge and skill which influence one's competence...directly links competence with the standards of practice". (p. 4). Standards have been suggested to be useful in evaluation of outcomes (measurable end results or changes). Gilmore, Niedert, Leif, & Nichols (1993), in reviewing consultant dietitians, stated that "it is the responsibility of each individual practitioner to evaluate practice and maintain competence as well as to evaluate the professional standards and contribute to the advancement of the dietetics profession" (p. 6). Indeed,

standards have been established for dietitians working in a variety of practice settings across Canada. They tend to be generic and describe acceptable professional behaviour. Among other reasons, they "promote the role and accountability of dietitians to the public, other professionals, and themselves" (College of Dietitians of Ontario, 1996; Dietitians of Canada, 1996).

Competence Assessment

Assessment of competence can occur both within the employment setting (within the construct of the performance review), or from a broader perspective within the regulatory environment. The performance review process is well documented. Concepts utilized within staff performance evaluation--provision of formative and summative feedback to employees, comparing performance with established standards--are well documented in the literature (Wilburn, 1987; Miller, 1984). Some performance review models even go so far as to develop instruments to assess the competence of employees at advancing levels of practice (MacKay, Grantham, Ross, Brown & Beanlands, 1990), consistent with the continuum of competence put forward by Benner (1982) and others.

Use of employer performance evaluations as instruments for measuring ongoing competence, however, would not be realistic, as the measures used within employer performance reviews are diverse. This could be potentially useful to the professional association were the performance review a "standardized... valid and reliable criterion-referenced instrument". (Gray, 1984, p. 28). Gray also advocated other methods in recredentialing evaluation, including mandatory continuing education, and peer review/audit.

Methods of assessment of continued competency were addressed by Ashton (1990)—examination, peer assessment, and taking of approved educational courses. She iterated the importance of maintaining competency as ensuring safe practice for the public, and in keeping a part of a social contract. Mackay, Grantham, Ross, Brown and Beanlands (1990) also discussed ongoing competence of nurses in a clinical setting. In a study conducted at the Victoria General Hospital in Halifax, Nova Scotia, they found that the competencies and behaviour statements that had been identified in their appraisal instrument were a reliable and valid measure of clinical nursing practice.

D'Orvilliers , Tosh-Conklin and Link (1993), in their development of a criteria-based performance appraisal system for a set of nursing staff, took the additional step of looking more comprehensively at ongoing competence. They developed a similar model to that of McGregor (1990), in clearly defining performance expectations and standards of care, then used these as the basis for evaluation of individual practice. In doing so, this system helped to make the link from identification of elements of competence to measurement of those elements in a practice setting.

Girot (Journal of Advanced Nursing, 1993) addressed the complexity of measuring competence in real practice situations, also citing Benner (1982) in identifying different levels of competence, from novice to expert. This concept is also supported by Eraut (1994), who stated that competence has at least two dimensions, scope and quality. "Scope dimension concerns what a person is competent in, the range of roles, tasks and situations for which their competence is established or may be reliably inferred. The quality dimension concerns judgments about the quality of that work on a continuum from being a novice, who is not yet competent in that particular task, to being an expert

acknowledged by colleagues as having progressed well beyond the level of competence." (p. 167). Chambers, Gilmore, O'Sullivan and Mitchell (1997) described characteristics of performance at various stages of professional development, providing a model for evaluation based on the individual's stage in the novice-expert continuum.

Campbell and Glazer (1984) addressed the issue of ongoing competence, in their examination of recertification of physicians' assistants. While they found that administration of an entry-level examination for the purpose of recertification did provide a means of peer comparison, they could not draw conclusions about this method as a measure of ongoing competence in practitioners. They called for measures of on-the-job performance, as a means of validation of these examination results.

Kane (1992) reviewed several methods of assessment of professional competence. Direct observation of performance, simulations (real-life and computer-based), and written tests were reviewed. Kane concluded that "the choice of method for evaluating professional competence involves a series of trade-offs. As we move from performance testing to simulations to objective tests, our observations become more standardized but less realistic." (p. 180).

It may be observed, upon review of the competence assessment literature, that there is no simple means to determine ongoing competence in existence for any particular professional group. "Measures" of competence appear to refer to individual cases such as performance reviews, where an individual's performance can be contrasted directly with performance expectations within a particular work setting. However, ongoing competence from the professional regulatory body perspective is a more complex concept which must consider the scope and complexity of the practice of numerous practitioners.

Professional regulatory bodies therefore view ongoing competence within an "assurance" framework. Various mechanisms in use by professional regulatory bodies to assure ongoing professional competence will be explored as we continue.

Mechanisms of Competence Assessment

Licensure Examinations

Rethans, Sturmans, Drop, van der Vleuten, & Hobus (1991) studied practicing physicians, and determined that there was a difference between competence and performance of doctors. They also found that competence was a predictor of performance (p.1380).

The College of Pharmacists of British Columbia (Fielding, Page, Schulzer, Rogers & O'Byrne, 1992) proposed a relicensure examination for all practicing pharmacists as a general screen of practice knowledge. This process has since been set in place as part of B.C. Pharmacists' continuing competence model (Fielding, Page, Rogers, O'Byrne, Schulzer, Moody & Dyer, 1997). The recertification examination was selected because the College of Pharmacists had found that "clinically relevant knowledge and clinical performance (problem solving) were highly correlated, and that the relationship between knowledge and clinical performance strengthened with several years of practice" (Fielding, Page, Rogers, Schulzer, Moody & O'Byrne, 1994, p. 363). In fact, Bell Campbell & Glazer (1984) found, in their study of recent graduates versus experienced physicians assistants' scores on entry level examinations, that there was a high level of correlation between individuals' original and repeat examination scores. They could not, however, conclude that this method of examination could be a reliable method of recertification of practicing health professionals, and recommended further study.

Violato, Marini, Toews, Lockyer & Fidler (1997) reported on a physician competence model which used a multidimensional approach, using patient, peer physician, referring or referral physician-assessment, and self-assessment. This model was demonstrated to be reliable and meaningful.

Continuing Education Reporting

Reporting of hours in continuing education activities is a common method of competence assessment. Much is reported in the literature on this topic. Several professional groups have looked at reporting of continuing education as one component of their competence assessment frameworks.

Cyril Houle (1980) in his work on professional education, emphasized the need to consider continuing education within the broader picture of professionalization: "Continuing education should be considered as part of an entire process of learning that continues throughout the lifespan" (308). In keeping with this recommendation, numerous professional regulatory bodies have established continuing education reporting systems for their memberships.

Thurston (1992) researched nursing associations with mandatory continuing education, finding that nurses had to be highly motivated to maintain competence on their own, therefore advocated mandatory continuing education as a means of providing formal programs so that nurses could maintain competence. Penny (1989) also explored the nursing environment, looking at the Florida state nursing regulatory system. This study found benefit in mandatory continuing education for this professional group, and noted that where flexibility in learning methods was established, professionals would

have more latitude. Therefore continuing education would be more likely to match individual learning needs.

Others also supported the concept of mandatory continuing education. For example, Perry (1995) identified mandatory continuing education as "planned education activities intended to build upon the educational and experiential bases of the professional nurse for the enhancement of practice, education, administration, research or theory development to the end of improving the health of the public. (p. 766). DeHaven (1990) concurred, having conducted a study which evaluated nurses who attended continuing education sessions. DeHaven found that the main reason for attendance was to improve or expand professional knowledge, even in the presence of mandatory continuing education laws. (p. 104).

There exists little doubt as to the benefits of continuing education in the maintenance of competence of health professionals. However, there does exist controversy as to whether mandatory continuing education is relevant to individual learning needs. Hutton (1987) reviewed research on nurses' attitudes and perceived outcomes of mandatory continuing education, finding a positive impact on educational behaviour and attitude of nurses. Puetz and Rytting (1979), as early as 1979, identified that continuing education must be relevant to an individual's practice. Kiener and Hentschel (1987) studied continuing education programs. They showed that programs tend to be more effective (i.e., resulting in behavioural change) based on aspects of the continuing professional education program, the individual learner, the proposed behaviour change, and the social system in which the individual operated.

White (1976) also advocated the overall need for continuing education, and outlined four broad objectives if professionals were to remain competent. These objectives were:

1. Maintain professional competency
2. Improve professional skills
3. Prepare for new professional roles
4. Develop interprofessional cooperation for the benefit of patients and the general public.

"These objectives assume that increasing levels of competence are required to assure quality performance." (p. 16). Farley (1987) also supported the view that continuing education does make a difference. The rationale for advocating mandatory continuing education has not been misplaced—looking at positive patient outcomes as the final results. Potential stakeholders in continuing education include planners, instructors, health professionals/recipients, and patients (Mazmanian, Mazmanian, & Waugh, 1997). While continuing education in itself has clearly been demonstrated to make a difference, many researchers suggest that continuing education include an additional element, that of relevance to practice. While a positive link has been demonstrated between continuing education for health professionals and those professionals' behaviour (Nona, Kenny & Johnson, 1988), the literature also stresses the importance of meeting the learning needs of participants. In fact, continuing professional education on its own may fail to meet the expectation of acting as a competency assurance measure (Young & Willie, 1984). These authors also cautioned against self-assessment, as practitioners may not be aware of current standards of practice against

which to make accurate judgments: "Continuing competence rather than participation in continuing education activities should be the ultimate aim. Measures such as CEUs (continuing education units), clock hours, professional growth credits, and the like, which suggest quantity, promote the latter (quantity). Such systems must be replaced with measures more qualitative in nature that promote competence." (p. 120).

Little (1993) also pointed out the need to connect the concept of competence with continuing education. Gathers (1988) conceded that mandatory continuing education results from a failure of the voluntary approach. Little found that mandatory continuing education systems rely on two major assumptions—that performance depends on knowledge, and that the necessary knowledge can be delivered by mandatory continuing education. Gathers identified that this approach does not consider the factor that the attitude of practitioners plays in their learning. This is consistent with Knowles' theory of adult education, supporting Knowles' key principles that adults learners learn what they want to learn, are self-directed in their learning, and want to apply learning (1980, pp. 43-44).

Peden, Rose & Smith (1992), in their study of the impact of continuing education on nursing practice, found that continuing education can improve nursing practice and patient care, but only to the extent that a recommended practice or behaviour is implemented. This reinforced the conclusions of Gathers regarding attitude. Support is also found in the work of Shaw (1990), who found that "clock hours and continuing education units did not necessarily equate with competence" (p. 227). Shaw subsequently suggested other alternatives such as periodic re-examination for relicensure.

Davee & McHugh (1995) also pointed out that mandatory continuing education does not address learning needs (p. 102), and that this quantitative evaluation measure is problematic for nurses in expanded roles. It is important to keep this in mind as we consider a competence framework development for dietitians, as dietitians practice in a number of roles, many in advanced practice.

Gosnell (1984, p. 10): "findings are indicating minimal evidence which supports the idea that there is any relationship between continuing education, professional practice and patient outcomes". These findings were also supported by O'Neill Hewlett & Wright Eichelberger (1996) who found that "no data existed to support the premise that continuing education had a direct relationship to nursing competency" (p. 181).

Continuing education can be advantageous. It has been demonstrated that "CME (continuing medical education) is more effective when it incorporates practice-based enabling and reinforcing strategies and that adequate assessment of physicians' needs leads to increased potential for change. (p. 1116, Davis, Thomson, Oxman, & Haynes, 1992). Montague (1994) went one step further to suggest that physicians themselves should be able to pinpoint the gaps in their current practice (i.e., should be able to identify their own learning needs). Again, this is consistent with Knowles' theory of adult learners.

There are proponents of alternatives to mandatory continuing education which incorporate principles of adult learning. Donen (1998) advocated one model, which included the following principles:

- the physician, and the medical profession, have a moral obligation to ensure continuing professional development (CPD) so that physicians are current in their knowledge and competent in practice performance. Principles for adult learning should be built into this educational development

- society and its advocates, the licensing authorities, have an obligation to identify regularly areas of new knowledge and practice competence that physicians must use to ensure ongoing licensure
- the physician must be able to demonstrate that any professional educational development undertaken has confirmed that her or his current practice approach is in keeping with acceptable standards and current practices, or that there has been a change in clinical practice behaviour to meet the recommended changes. (p. 1045).

The Royal College of Physicians and Surgeons of Canada (1998, pp. 23- 24) has developed a program in response to criticisms of mandatory continuing education, which it calls "MOCOMP", or "Maintenance of Competence" program. Within this program, physicians are asked to develop their own learning plans based on practice needs. The outcome measure for continuing education is the impact on practice, and not hours of study. Because this program is self-directed, with the learner defining his/her own learning, it embraces many of the principles of adult learning as iterated by Knowles, Cervero, and Houle.

In some cases, a specific number of hours of reported continuing education must be upheld to maintain re-licensure (Holzemer, 1988). Holzemer cited Benner (1982, p. 304) in a definition of competency as "the ability to perform the task with desirable outcomes under the varied circumstances of the real world". He went on to discuss Benner's work regarding competency-based education, stating that "competencies are setting-specific and extremely complex to identify, label, and assess" (p. 154).

Davee and McHugh (1995) surveyed states in the United States regarding their regulations mandating continuing education for relicensure of nurses. They cited the American Nurses Association's definition of continuing education (1990):

> The purpose of continuing education in nursing is to build upon varied educational and experiential bases for the enhancement of practice, education, administration, research, or theory development, to the end of maintaining and

> improving the health of the public. The content of continuing education consisted of concepts, principles, research, or theories related to nursing that build on previously acquired knowledge, skills, and attitudes. The structure and content of this lifelong learning process is flexible, has immediate or future application, and promotes professional development and advances the career goals of registered nurses.

Most of the states surveyed required mandatory continuing education—specifically, attendance at continuing education (CE) sessions. Davee and McHugh identified, however, that "requiring attendance at CE courses as a quantitative measure of evaluation is particularly problematic for nurses in expanded roles...Simple course attendance at narrowly defined nursing continuing education offerings is not an appropriate measure of continued learning and competence for this group of licensees" (p. 102).

Yoder Wise and Cox (1984) structured a framework for evaluation of an overall continuing education program. Although their framework was targeted at formal continuing education offerings as courses, it could well be adapted to other continuing education methodologies.

Gosnell (1984) synthesized a model for classification of continuing nursing education, based on previous literature. Hers is a four stage model, comprised of participants' evaluation of a continuing education event; measurable learning evaluation; behavioural performance evaluation (participants' behaviour change due to the continuing education); and outcome-results evaluation.

Although Gosnell's model is also event oriented, again it provided a model that could theoretically be applied to other types of continuing education settings other than the traditional classroom. Gosnell emphasized that the ultimate outcome of continuing nursing education is improved health care. This goal could be adopted by any of the

professional regulatory bodies that have been chosen to be interviewed throughout this study. Some relevant comments by Gosnell (p. 10, 1984) follow:

> The movement to mandate continuing education as a requirement for relicensure implies that continuing education assures continued competence and will result in desired patient outcomes...the inference is unsupported by the majority of research findings to date...Findings are indicating minimal evidence which supports the idea that there is any relationship between continuing education, professional practice, and patient outcomes.

When we look at how some professions have framed these concepts—for example in looking at continuing education models, and the need to evaluate the outcome of the continuing education process, the nursing literature provides some examples. For example, Yeaw (1987) presented a paradigm which outlined the relationship of construct (how did the learner learn?), content (what did the learner learn?), and consequence (what did the learner do with what he/she learned?). This model provided a very good template upon which many professional regulatory bodies could overlay their continuing education process, be it mandatory or self-reported. The same questions are relevant nonetheless.

Waddell (1991), through a meta-analysis of the literature, looked at the effect of continuing education on nursing practice, trying to determine whether it had any positive effect. Overall, continuing education did positively affect nursing practice. "Those who decide on the requirements for recertification and promotion can have greater assurance that requiring continuing nursing education has validity" (p. 116). However, this study was unable to determine why continuing nursing education was able to impact nursing practice.

Coles (1996) also advocated the need for continuing education, or professional development, to be practice-focused, or meaningful to professional practice.

Self Assessment

Girot (Nurse Education Today, 1993), in a review of the literature on competence assessment, cited Schon (1983), stating that "knowledge is based on the protracted and unique personal experience of the person concerned, and only exists in that individual professional's actions" (p. 86). Girot also discussed the value of reflection, and held that "continuous assessment provides opportunities for both trained staff and learners to reflect upon and monitor their own progress" (87). Again, this is in keeping with Knowles (1978, 1980, cited by Cannon & Waters, 1993), whose structure advocated a mutual planning in which participants were involved with every stage of a learning activity. "Educational interests must involve the learner". Des Roches (Jul/Aug 1996) also supported the individual practitioner's ability to determine learning needs and to develop a learning plan.

We see this theory put into practice by some professional regulatory bodies. For example, the College of Occupational Therapists of Ontario (Kuretzky, 1997) advocated self-assessment and self reflection of the individual's practice in relation to the College's Standards of Practice. Self-identification of learning needs was also supported in the nursing profession (Rath, Boblin-Cummings, Baumann, Parrott & Parsons (1996). This was based on adult learning theory (cited Knowles, 1980), that learners participate in the learning plan, and that adult learners need to feel they have control over their learning.

Murdock & Neafsey (1995) demonstrated that self-efficacy measures could be valid and reliable instruments which could be developed from program objectives. In a study conducted with advanced practice nurses attending a continuing education course, a self-efficacy instrument was developed from the course objectives. This instrument was

used to assess changes occurring in self-efficacy as a result of learning, as well as changes in knowledge as an outcome of the learning session.

Self assessment programs are presently available to professionals for their use. The American Society for Parenteral and Enteral Nutrition (1997) has developed tools to identify specific strengths and weaknesses in clinical nutrition knowledge. In addition, the American Dietetic Association's Commission on Dietetic Registration has a self assessment series for dietetic professionals (American Dietetic Association, 1995).

Mentoring

The mentoring process has been recommended by some as being of assistance in establishing goals, learning needs, objectives, learning activities, and evaluation. The goals of this process as advocated by Crandall & Cacy (1993) comprised enhancement and unification of the continuing advancement of the professional and the profession.

Peer Review

Peer review has also been attested to by a number of colleges/professional associations in order to validate the self-assessment process. Two examples of users of peer review in their competence frameworks include the College of Occupational Therapists of Ontario (Kuretzky, 1997), and the College of Physicians and Surgeons of Alberta (1998). Support for peer appraisals also comes from Houle (1980). He endorsed this being carried out in an organized manner, under the direction of a committee, and based on standards of practice.

A study by the American Board of Internal Medicine (Ramsey, Wenrich, Carline, Inui, Larson, & LoGerfo, 1993) suggested that "peer ratings provide a practical method to

assess the performance of practicing internists such as humanistic qualities and communication skills that are difficult to evaluate reliably with other measures."

Idzikowski & Landers (1977) reported that peer review could become a learning experience through which the participants received both positive and negative comments about their professional performance. Another study (Goebel, 1997) found that the behaviour of medical residents in an ambulatory care setting was improved through use of clinical practice guidelines and peer review.

Peer review has also been used successfully to evaluate practicing physicians at the hospital level. Ramsey, Carline, Blank & Wenrich (1997) suggested that peer ratings were acceptable to the majority of physicians.

Learning Portfolios

The use of learning portfolios has been supported by a number of groups, including physicians and nurses. Rath, Boblin-Cummings, Baumann, Parrott & Parsons (1996) identified a portfolio as containing "documentation of all enhancement experiences...to be reviewed on a regular basis" (p. 15). They also stressed the need to evaluate the application of knowledge, skills, and attitudes on clinical practice after the continuing education experience had been completed. Campbell, Fox, Parboosingh, and Tunde Gondocz (1995) looked specifically at self-reported continuing education within the medical profession. They evaluated use of diaries by members of the Royal College of Physicians and Surgeons of Canada (RCPSC). The "MOCOMP" (Maintenance of Competence) program, which is sponsored by the RCPSC, supports independent pursuit of learning by physicians based on theoretical models of how physicians learn from practice and how they learn and make changes in their clinical practice. This study was

conducted using an early version of the diary tool. At the time of the report, software was being developed to facilitate the diary process, with plans to link to an electronic bulletin board service to link peers (this would facilitate the professional association's monitoring of continuing education activities as well). The use of learning portfolios has also been implemented by the College of Occupational Therapists of Ontario (Kuretzky, 1997), who adopted the use of "PC Diary".

Parboosingh (1996) further discussed use of the MOCOMP software, which had been developed by this time, for application within nursing. "Professionals....learn and change naturally by solving problems and by taking ownership of their learning in a purposeful manner" (p. 76). He discussed two types of learning portfolios in use:

1. A personal profile required by the United Kingdom Central Council for Nursing, which included:
   (a) pre- and post-registration education, employment, and professional education history
   (b) record of statutory five days professional development
   (c) information relating to the Council's requirements
   (d) papers, journal entries, examples of classroom work or anything else that is meaningful to the practitioner and represents growth and understanding in this area.
2. A sequence of steps followed by physician trainees (cited Pietroni, Heath, Burrows, Savage, Sowaen & Millard, 1993 and Jarvinen & Kohonen, 1995):
   (a) first, identification of experiences which the learner defined as significant

(b) identification of what learning arose from these experiences, and how that learning could be demonstrated in practice,

(c) identification of further learning needs

(d) determination of ways in which these learning needs could be met.

Others certainly advocated the learning portfolio as a positive tool in the professional development/quality assurance model. Jensen & Saylor (1994) cited Schon's "reflection in action" model (1983, 1987), being the "process whereby the professional practitioner combines education and experience to produce new ways of knowing and thinking about problems in a domain."

Some groups have operationalized the learning portfolio as a component of their competence frameworks--for example, the Ontario College of Pharmacists (OCP) (DesRoches, Jul/Aug 1996). The OCP, under the principle that the individual pharmacist should be responsible for maintaining his/her own record of learning experiences, has introduced the learning portfolio in an effort to have individuals review and compare, and thereby enhance, their personal learning opportunities. Outcomes of learning were also to be identified by practitioners. This is particularly relevant, as the Royal College of Physicians and Surgeons of Canada has also asked for this under the MOCOMP program. (Royal College of Physicians and Surgeons of Canada, 1998). "The MOCOMP program's philosophy is that participation in a planned program...will assist specialists to maintain and enhance their clinical competence".

However, Turnbull and Holt (1993) identified that self-reporting is one of the weaker methods of assessing knowledge application. They reviewed the conceptual frameworks of Cervero and Houle in their application to continuing education in allied

health professions. From Cervero's framework (1985) which follows, evaluation of practitioner competence can be assessed (evaluation in the fourth category—learner knowledge, skills, and attitudes; focuses on changes in learners' cognitive, affective, or psychomotor competence). One could also conclude that the fifth category would also be involved in competence evaluation—application of learning after the program; the degree to which the knowledge, skills and attitudes learned from the program are used in the work setting. The key points in Cervero's framework have been summarized in Table 1.

Table 1. Cervero's Framework for Planning Continuing Education

Step	*Description*
1. Assesses what was planned versus what was actually implemented	Information collected can be useful in planning future programs
2. Participation: one of the most common evaluation tools	Number of participants. Provides information that is useful in determining whether programs will be offered and in judging their effectiveness.
3. Satisfaction	Evidence of learner satisfaction on course content, educational process, instructor, facilities, and cost.
4. Learner knowledge, skills, and attitudes	Focuses on changes in learners' cognitive, affective, or psychomotor competence.
5. Application of learning after the program	The degree to which the knowledge, skills and attitudes learned from the program are used in the work setting
6. Impact of application of learning	Assesses the extent to which the program contributed to improved health care
7. Program characteristics associated with outcomes	Attempts to link information from the first three categories with information from the second three categories.

Benner (1982) cautioned against relying too heavily upon competency testing, stating that "practice is more complex than current test methodology can evaluate" (p. 309). It is important to identified skilled performance and to identify this with examples.

Competency labels cannot stand alone. Expectations of uniform performance based on a particular set of tested or demonstrated sub-skills or enabling abilities is not realistic. Therefore, there exists a need to determine which aspects of the competency are measurable and by what means they can be measured.

Finally, key components identified for inclusion in a competence framework have been recommended by the Alliance of Physical Rehabilitation Societies (1997). "A quality management program must support the measurement, monitoring, and enhancement of individual competencies." (p. 1). Further, with reference to continuing education, "evidence suggests that mandatory CE is not a viable mechanism to maintain competence. However, there is evidence to suggest that the use of effective lifelong learning strategies is shown to affect competency of practitioners". (p. 4). The College of Nurses of Ontario (1996) outlined their competence program--this included a self assessment tool to meet reflective practice requirements, incorporated peer feedback, implemented a learning plan (at least annually), and assessed competence through professional standards.

Summary

To summarize, competence cannot be identified as a simple entity. It is a complex concept, and does not necessarily occur along a linear continuum. While employers view competence as a measurable entity, looking at individual practitioners within the scope of a specific practice setting, professional regulatory bodies view competence within a quality assurance framework. Several components crucial to a competence assurance program have been identified and are in use by a number of organizations. Some components of competence assurance frameworks which have been

explored in this chapter include (a) licensure, or certification examinations, (b) provision of continuing education opportunities, and (c) monitoring of ongoing competence. Further, mechanisms within these frameworks to assure ongoing professional competence which were examined include (a) continuing education, or professional development reporting, (b) use of learning portfolios, (c) self assessment, (d) mentoring, and (e) peer review. These mechanisms will be reviewed further in the chapters to follow, as this study examines how Alberta professional regulatory bodies are dealing with assuring member competence. The next chapters will explore in greater detail what competence assurance frameworks are currently in use, the mechanisms that have been identified within those frameworks, in addition to other considerations recognized as significant by professional regulatory bodies in competence program implementation.

CHAPTER THREE

RESEARCH METHOD

Review

The methodology in this research was designed to evaluate how ongoing professional competence can be assured in dietetics. The elements contained in this chapter include (a) design, (b) population and sample, (c) data collection, (d) consent and confidentiality, (e) data analysis, and (f) pilot study.

Research Problem

The problem addressed by this study is "how can ongoing professional competence be assured in dietetics?" In identification of sub-problems, this research study examined (a) what mechanisms are in place within the existing competence frameworks of professional regulatory bodies to evaluate ongoing professional competence, (b) what competence frameworks do professional regulatory bodies have in place to assure ongoing professional competence, and (c) how can competence frameworks and in use by professional regulatory bodies be adapted to meet the needs of assuring ongoing professional competence of registered dietitians.

Design

This qualitative study consisted of a series of interviews, totaling eight (including one pilot interview). Frameworks being utilized by professional regulatory bodies in Alberta to assess ongoing membership competence were identified, and the components of these frameworks were reviewed, including competence assurance mechanisms, which were compared and contrasted with those found in the literature. This work was undertaken with the expectation of synthesizing a framework using grounded theory

(Glaser & Strauss, 1967) that could potentially be useful in an application for registered dietitians' assurance of membership competence.

Population and Sample

The target population for this study consisted of self-regulating professional bodies within the province of Alberta. These bodies are also known as professional associations or colleges. The accessible population included those groups that were currently developing, or had recently developed, mechanisms to assure ongoing membership competence. There presently exist in Alberta some 30 self regulated health professions, in addition to other non-health professional associations which represent professions such as lawyers, chartered accountants, and engineers. Specific groups which were approached to be involved in this study included the Alberta Pharmaceutical Association (pilot interview), the College of Physicians and Surgeons of Alberta, the Alberta Association of Registered Nurses, the Alberta Association of Registered Occupational Therapists, the Alberta Association of Social Workers, the Alberta Professional Engineers, Geologists, and Geophysicists; the Alberta Institute of Chartered Accountants; and the Alberta Dental Hygienists Association.

The pilot group was approached for the initial interview after the researcher had met a member of the Alberta Pharmaceutical Association (APA) who was presenting an overview of the APA's competence program to a group of health professions. Because this contact provided a valuable opportunity to dialogue with a group that had recently developed and implemented a competence program, it seemed a likely choice to approach this group as a pilot interview in this study.

The seven associations that participated in the main study were selected through known contact individuals within these associations. These contacts arose as a result of the researcher's volunteer work within the Alberta Registered Dietitians Association, and as the result of personal and family contacts. Acquaintances and family members who were members of professional associations were able to provide contact names of appropriate individuals within professional associations.

The criteria for selection of the sample from the accessible population included nonetheless:

- self-regulated professional body
- competence program either in place or under development
- amenable to participation in this study under the terms outlined in Appendix C.

An effort was made to deliberately include some non-health professional groups in the study sample so as to broaden the perspective provided regarding competence frameworks beyond the spectrum of health care.

Because the sample was gathered in such a focused method, some degree of researcher bias may exist in the conduct of this research study. Awareness of this potential bias led to an effort to validate findings against the literature, and to ensure that data available from other professional associations about their competence programs were also reported here.

Consent and Confidentiality

Associations were contacted initially by telephone regarding their general agreement to participate in the study. Initial telephone contacts (association office staff)

were asked to identify an individual within the association who was responsible for practice review or professional practice matters. Further discussion with these identified individuals was held via the telephone, outlining the study in progress and rationale. Initial verbal consent to be interviewed was obtained. These individuals generally held the status of registrar (or equivalent) position within their respective associations. A letter of intent was forwarded (Appendix C) to each individual who had verbally agreed to participate in the study in order to outline the nature and purpose of the research, the date and time of the interview, other details (i.e., no remuneration for participation, ability to opt out, assurance of personal anonymity), and to provide them with telephone contact names and numbers should they have had further questions or concerns regarding the study. Initial contact with interview candidates was made by telephone, at which time the purpose of the study was reviewed prior to requesting verbal consent to participate. A letter of confirmation of the interview (Appendix E), along with intended interview questions (Appendix B) was forwarded to each participant in advance of the interview. Interviews were held at a time and place convenient to the participants, and were conducted in person. Prior to commencement of each interview, the purpose of the study was reviewed with the participant, and formal consent was gained using the attached consent form (Appendix D).

Individual confidentiality was maintained by exclusion of participant names throughout transcript preparation, and by not utilizing interview participants' names in the text of this document, and by storage of transcripts and audiotapes in a secure location. However, the sample for this study was derived from a finite population. Within the

defined community of professional regulatory bodies, particularly within health care, there is a high potential for interviewed individuals to be known to one another.

Data Collection

Data was collected by means of open-ended questions using a semi-structured interview approach. Interviews were conducted throughout the spring and summer of 1997. Questions were related to the particular body's approach to assessment of ongoing membership competence, and queried use and application of practice standards and competencies. The finalized interview schedule is provided in Appendix B.

Interviews were audiotaped with the permission of the participant, with the exception of one participant who declined to be audiotaped. In this case, detailed notes were taken at the time of the interview, and together with supporting documentation regarding the association's competence program, were returned to the participant for verification prior to inclusion in data analysis. The initial interview was treated as a pilot. In this manner, the questions used could be validated to determine whether intended meanings were interpreted correctly by participants. In addition, preliminary analysis of pilot results served to inform the study, identifying theme categories for question responses, and leading to additional questions for subsequent interviews.

Professional regulatory body representatives were questioned in general terms regarding association demographics--size of membership, relationship to related associations at local, provincial, and national levels, and then more specifically regarding competence mechanisms. Specific areas of competence explored included what frameworks were in use, if any; for how long they had had competence frameworks in place; whether or not they felt that the mechanisms housed within this framework assured

member competence; how they had implemented their particular competence framework; and how the implementation had been communicated to their membership.

Data Analysis

Audiotapes were transcribed in full by the researcher, then transcripts were returned to participants for verification of intended meaning and overall accuracy. Anonymity of the participants was maintained by replacing names of individuals with code words and pseudonyms. The researcher alone was aware of the true identify of each participant. Audiotapes were retained by the researcher in a secure location.

Open coding (Berg, 1995; Strauss, 1987) was carried out on the transcripts to yield general themes of standards, role, practitioner needs, setting, process, barriers, competencies, specialization, certification, inter-agency agreement, patient focused care, self assessment, professional portfolios, awareness of professional responsibilities, on-site assessment, confidentiality, testing mechanisms, audit logistics, evaluation validity, employer communications, role of employer versus individual practitioner, experienced practitioner competence, and self direction. Subsequently, using a technique known as affinity grouping (Brassard, 1989), which is similar to a modified DACUM (Canada, 1973) method, these theme categories were placed by the researcher into like groupings in order to determine broader overriding themes to the transcript content. These broader themes will be discussed in detail in the following chapter.

Pilot Study

The interview schedule was piloted with the initial interview (Appendix A). Interview questions were initially piloted by conducting an interview with a representative of one professional association. Verbal consent was obtained for this

interview over the telephone when first requesting the interview, and again before commencing the interview in the participant's office. The purpose of this interview as a class assignment was established, as well as the potential for inclusion into the final study results as a pilot.

Overall, responses to questions were consistent with researcher expectations. Professional regulatory bodies are indeed being faced with the challenge of measuring ongoing competence within their memberships, and are addressing this issue through development of frameworks and evaluation mechanisms. Professional regulatory bodies have identified competencies and standards of practice, and are linking with employers as well as individual members in their attempt to review practice. Upon initial analysis of the data, some gaps in interview questions were noted and were added to the finalized interview schedule that was utilized for the main study. These included questions relating more specifically to the application of competency and standards statements, to actual measurement of individual competence (asking the interviewee for specific examples of application), questions surrounding frequency and scope of competence review of professional membership, and questions regarding membership acceptance and support of the review process.

Summary

This chapter, after reiteration of the research problem and sub-problems, identified the study sample and population, data collection and analysis methods, and discussed the pilot study and its preliminary findings. Subsequent chapters will go into study findings in greater detail, will contrast findings with the literature, and will provide

a series of recommendations regarding assurance of ongoing professional competence for the dietetics profession.

CHAPTER FOUR

FINDINGS

This chapter reviews the findings from the data obtained in this research study. The purpose of this study is again reviewed, followed by an outline of the research problem and sub-problems, and a summary of the methodology utilized in gathering the data. Study findings are discussed in detail, starting with identification of themes, which came forward from transcript analysis. Each of these themes is highlighted in view of its relationship to the professional associations that participated in this study.

Research Problem and Sub-problems

The problem addressed by this study is "how can ongoing professional competence be assured in dietetics?" In identification of sub-problems, this research study examined (a) what mechanisms were in place within the existing competence frameworks of professional regulatory bodies to evaluate ongoing professional competence, (b) what competence frameworks do regulatory bodies have in place to assure ongoing professional competence, and (c) how competence programs in use by professional regulatory bodies studied can be adapted to meet the needs of assuring ongoing professional competence of registered dietitians.

Method

After an initial pilot interview, and analysis of the pilot interview transcript, the main study consisted of seven subsequent interviews of various self-regulated professional association representatives. These associations included the College of Physicians and Surgeons of Alberta, the Alberta Association of Registered Nurses, the Alberta Association of Registered Occupational Therapists, the Alberta Association of

Social Workers, the Alberta Professional Engineers, Geologists, and Geophysicists; the Alberta Institute of Chartered Accountants; and the Alberta Dental Hygienists Association.

Open coding (Berg, 1995; Strauss, 1987) was carried out on the transcripts. This was done by identification of each unique theme with a different colour of felt marker, then assigning a title to each theme identified. General themes included standards, role, practitioner needs, setting, process, barriers, competencies, specialization, certification, inter-agency agreement, patient focused care, self assessment, professional portfolios, awareness of professional responsibilities, on-site assessment, confidentiality, testing mechanisms, audit logistics, evaluation validity, employer communications, role of employer versus individual practitioner, experienced practitioner competence, and self direction. Next, using a technique known as affinity grouping (Brassard, 1989), which is similar to a modified DACUM method (Government of Canada, 1973), these theme categories were placed by the researcher into like groupings in order to determine broader overriding themes to the transcript content. The affinity grouping method involved identification of each unique idea separately (in this case, ideas or themes from transcripts). Once all ideas have been generated, "like" ideas are grouped into broad themes, which are subsequently titled. This was accomplished by means of grouping the data into a table format, with broad theme headings forming the vertical axis and the names of professional regulatory bodies forming the horizontal axis. Details culled from the transcripts that related to a particular theme were then slotted into the appropriate cell within the table.

The affinity method yields groups and sub-groups of data. In this aspect it is similar to the DACUM approach. However, because this analysis was carried out by the researcher alone, its validity is not as established as had the full DACUM approach been used. Therefore, findings were validated with the adult education literature to determine whether elements of competence programs had grounding in adult education theory.

Findings

Transcript analysis was undertaken with the intent to search for themes which related to mechanisms and frameworks for ongoing competence assurance. This was done bearing in mind the research problem addressed by this study, "how can ongoing professional competence be assured in dietetics?" as well as the sub-problems, (a) what mechanisms were in place within the existing competence frameworks of professional regulatory bodies to evaluate ongoing professional competence, (b) what competence frameworks do regulatory bodies have in place to assure ongoing professional competence, and (c) how competence programs in use by professional regulatory bodies studied can be adapted to meet the needs of assuring ongoing professional competence of registered dietitians.

Broad themes identified by initial transcript analysis included: (a) professional standards, (b) certification examinations, (c) monitoring of ongoing competence, (d) recognition of entry-level versus experienced practitioner competence levels, (e) continuing education opportunities provided by association, and (f) competence program implementation. These broad themes were subsequently refined and re-grouped to reflect their placement within the life cycle of a professional career, and within the context of ongoing professional competence assurance. Certain themes could be identified as being

generally supportive of the overall competence concept. These are summarized in Table 2, and included professional standards, provision of continuing education opportunities by an association, and monitoring of ongoing competence. The use of a certification examination stood alone, as a mechanism to assure initial member competence. Other themes reflected aspects of implementation of a competence program. These were the communication of competence programs to members, and competence program implementation. Finally, the theme of monitoring ongoing competence was broken down to reflect mechanisms in place to assure ongoing professional competence. These mechanisms included: (a) professional development reporting, (b) self assessment, (c) audit/review processes, (d) client-driven assessment, and (e) peer review. These mechanisms will be described in detail in the following text. Each broad theme identified above will be discussed as it relates to the professional associations involved in this study. An overview of these mechanisms for assuring ongoing competence in relation to the professional regulatory bodies that participated in this study is illustrated in Table 3. However, themes related to competence program implementation will be discussed separately, as these were perceived to be distinct from the competence frameworks and mechanisms identified here, but still require substantial consideration, and are essential to the overall success of a competence program. Conclusions regarding particular themes, based on the literature, as well as recommendations, will be discussed in Chapter Five.

Table 2. Components of Competence Frameworks

		Certification Exam (entry level)	Professional Standards	Provision of Continuing Education Opportunities	Monitoring of Ongoing Competence
Associations[1]	AARN	✓ (national)	✓ (national competencies)	no	no
	AAROT	✓ (national)	✓	✓	no
	ASSW	being developed	✓ (drafting)	being developed	no
	ADHA	✓	✓ (national)	not directly	being developed
	AICA	✓ (national)	✓	no	✓
	APA (pilot)	✓	✓	no	✓
	APEGGA	no	✓[2]	✓	✓
	CPS	✓ (national)	✓ (isolated areas)	no	✓

Table 2 Legend:

✓	Component in place
no	not in existence at time of interview

[1] AARN: Alberta Association of Registered Nurses; AAROT: Alberta Association of Registered Occupational Therapists; AASW: Alberta Association of Social Workers; ADHA: Alberta Dental Hygienists' Association; AICA: Alberta Association of Chartered Accountants; APA: Alberta Pharmaceutical Association; APEGGA: Alberta Professional Engineers, Geologists, and Geophysicists Association; CPS: College of Physicians & Surgeons;.

[2] Some standards applicable to all members (e.g. human rights, environmental, safety), but not all standards have been defined to behavioural level.

Table 3. Ongoing Competence Monitoring Mechanisms

		Professional development reporting	Learning portfolios	Self assessment	Audit/review process	Client-driven assess-ment	Peer review
Associations[1]	AARN	no	no	✓[2]	no	no	no
	AAROT	✓ (voluntary)	no	no	no	no	no
	ASSW	planning program	no	no	✓	no	no
	ADHA	being developed	no	no	✓	no	no
	AICA	no	no	no	no	no	✓
	APA (pilot)	✓	✓	✓	✓	no	no
	APEGGA	✓	no	✓	✓	no	✓
	CPS	no	no	✓[3]	no	✓[3]	✓[3]

Table 3 Legend:	
✓	Component in place
no	not in existence at time of interview

[1] AARN: Alberta Association of Registered Nurses; AAROT: Alberta Association of Registered Occupational Therapists; AASW: Alberta Association of Social Workers; ADHA: Alberta Dental Hygienists' Association; AICA: Alberta Association of Chartered Accountants; APA: Alberta Pharmaceutical Association; APEGGA: Alberta Professional Engineers, Geologists, and Geophysicists Association; CPS: College of Physicians & Surgeons

[2] Required for specific groups--e.g., independent practitioners.

[3] Piloting program which includes self assessment, client assessment, and peer assessment components.

Demographics

The size of memberships of participating professional regulatory bodies ranged widely, from small memberships of approximately 700 to larger associations exceeding 24,000 members. Size may have had some influence on support of certain parameters of the competence program, as associations are dependent upon member fees for operating costs, and large associations have the advantage of economies of scale. It then follows that associations with larger memberships would have the ability to implement more complex competence programs (from an administrative perspective) as they could financially support the staff requirements for such a program.

One must also bear in mind that these data were collected throughout 1997. Due to the passage of time, some of these associations may have developed their programs to a greater extent than was reported at the time of the interview (i.e., this research can only represent a "snapshot" of what was in existence at the time of the interview).

Competence Framework Components

Professional regulatory bodies in general showed overwhelming support for the overall concept of continued competence. In fact, member competence is in itself one of the significant *"raisons d'être"* of professional regulatory bodies. The mechanisms by which professional regulatory bodies within this study demonstrated support of ongoing competence was by recognition of professional practice standards, and provision of continuing education opportunities for their memberships.

Certification Examination. Of the seven regulatory bodies participating in the main study, five had national certification examinations in place at the time of the interview. These included dental hygienists, occupational therapists, physicians, nurses,

and accountants. The sixth (social workers) was in the process of developing a certification examination. These examinations are based on national competencies, so in essence reflect a national standard which must be met in order to be recognized as a professional on a provincial level. Initial member competence is the first step to ongoing member competence, so this information has been included here. The seventh regulatory body (APEGGA, or Alberta Professional Engineers, Geologists and Geophysicists Association), rather than subscribe to a certification examination, relied on the outcome of formative testing at post secondary institutions to demonstrate technical ability within that particular profession, stating "the fact that they have been granted a degree certifies this."

Upon initial certification, or registration with a professional regulatory body, member candidates are often required to complete a form of examination.

Practice Standards. Most professions interviewed had practice standards in one form or another. Standards were generally identified as being quite broad in nature, with the intent to cover all practitioners within a given profession in various practice settings.

Standards are intended to reflect a minimum level of performance which one would expect all individuals within a given profession to be able to achieve. While some professions defined their standards as being rather broad (e.g., the College of Physicians and Surgeons, Pharmacists), due to the complexity and lack of "standardization" of patients (each case is unique), others had very specific standards which relate to specialized topics (Chartered Accountants), and relating to specific occupational settings (e.g. Nurses: Occupational Health Nurse). National standards were also identified by one

of the professional groups (Dental Hygienists), which had been accepted by the majority of the provinces.

Although not all associations identified the existence of practice standards *per se*, six of the seven interviewed had a national examination either in place at the time of the interview, or under development, soon to be implemented. This in itself is reflective of a national practice standard--examination candidates would need to demonstrate the minimum level of competence, or meet the national standard, in order to achieve a passing grade on the qualifying examination.

The relationship of practice standards to competence programs was also explored. Practice standards typically underpinned core concepts of competence programs, representing the basic standard by which competence is assured.

Codes of ethics or codes of conduct were identified by several of the participating associations as an element of ongoing competence assurance. Members' adherence to the code of conduct of their profession was interpreted as a practice standard, implying that ethics represent minimum codes to which a professional member is expected to comply.

Provision of Continuing Education Opportunities. Provision of continuing education opportunities for members directly supports maintenance of competence of the members of a professional regulatory body. One of the participating associations (Occupational Therapists) had developed a program to provide continuing education opportunities to its members. Two others (Social Workers, APEGGA) were in the developmental stages of creating continuing education programs. The desire to focus more on members' needs for professional development was voiced, either by putting on seminars, or by facilitating another institution to put on seminars, based on members'

continuing education needs. The other five associations did not have continuing education in place for their members at the time of the interview. The AARN (Alberta Association of Registered Nurses), for example, did not have a continuing education sector within its association, but saw its role as more facilitative. This included mention of course offerings to members via newsletters, and provision of member access to library materials, literature searches, or provision of books and articles to members on request. The ADHA (Alberta Dental Hygienists Association) had created linkages with a post-secondary institute, and would advise them of continuing education needs as identified by their members.

Ongoing Competence Monitoring Mechanisms

Several mechanisms were identified by professional regulatory bodies as being utilized in support of their particular competence programs. These included professional development reporting, self assessment, client-driven assessment, peer assessment, and the existence of an audit (or practice) review. These are in the following sections.

Professional Development Reporting. This was a popular means of assessing member competence. I have used the title "professional development reporting" here in lieu of the term "continuing education reporting", as "professional development" is more comprehensive, and would encompass continuing education reporting in addition to reporting of other forms of professional development activities. In five of the seven professional regulatory bodies interviewed, professional development reporting was either in place (APEGGA, APA [Alberta Pharmaceutical Association], AAROT [Alberta Association of Registered Occupational Therapists]), or the association was considering implementation of such a system (ADHA, AASW [Alberta Association of Social

Workers]). The foci of these systems ranged widely, however, reflecting the findings in the literature. While some preferred that members report a mandatory number of hours of continuing education activities within a strict framework (defined number of hours of activities within different categories), others were considering less stringent, more self-directed programs. One organization commented that they were not certain whether continuing education reporting would be mandatory, or voluntary when implemented by them.

Another professional regulatory body commented "...it is not good enough just to say 40 hours, but to have the association look at trends, and perhaps have a particular plan as to how [practitioners] should be gearing their development time. Then sponsor something." In one association that had implemented a professional development program, the desire to assess informal learning in addition to formal learning activities was expressed. This particular association advocated the use of learning portfolios to help members to expand their thinking when it came to learning, "because you learn every day as you go through your practice".

One group did not focus specifically on educational sessions, but rather on "professional development", which could include involvement in leadership activities (community-focused), and hours spent in professional practice (work) activities in addition to what is traditionally considered to be "educational". The number of hours worked in practice was used as a yardstick in three of the professions interviewed. Practitioners who fell short of the expected number of practice hours in a given year might be subject to upgrading expectations, such as a refresher course, in order to maintain their certification.

For the most part, professional regulatory bodies which advocated continued professional development, or continuing education, were also asking members to tie continuing education into their learning plans. Those professional regulatory bodies which also had responsibility for member services such as developing/presenting continuing education activities, were looking at members' self reported learning needs from the larger perspective, using these as a more global member needs assessment which warranted some type of continuing education development and implementation.

Learning portfolios were advocated by several of the professional groups interviewed. While professional groups varied widely in the amount of information required for annual reporting purposes for re-credentialing, they generally agreed to retain the ability to audit the individual practitioner--to request records of continuing education activities and other supporting documentation to demonstrate that these activities had actually been undertaken.

Self Assessment

Three of the participating groups (APA, APEGGA, CPS [College of Physicians and Surgeons]) were utilizing self assessment as a mechanism within their competence assurance frameworks. A fourth (AARN) had incorporated self assessment for one type of practitioner--those working in private practice settings. This private practice group must outline how they have established and utilized standards of practice within their practice setting, and demonstrate their adherence to the code of ethics. One group was piloting a voluntary system (CPS) whereby practitioners completed a self assessment which was paralleled with peer and client assessments of the same practitioner. This feedback was provided back to the individual for their professional development use.

They indicated that their testing showed a good correlation between how practitioners rate themselves and how clients rate them.

Two of the above groups (APA, APEGGA) also requested that their members develop a learning plan based on the needs identified in their self assessment.

Client Feedback. A client-driven assessment mechanism was being put in place by one organization (CPS) on a voluntary basis. This feedback was intended to be used in conjunction with individual practitioner self assessments. This was considered to be a fresh approach, particularly as professional work tends to involve client interaction. It would make sense to request client feedback, particularly in areas such as interpersonal communication.

Peer Review. The use of a peer assessment process was only identified by one of the professional regulatory bodies (CPS) participating in this study. The peer assessment program was voluntary at the time of the study, and would provide feedback to the individual under review. However, under existing legislation, this body did not have authority to request further assessments of an individual practitioner should peer review generate some potential problem areas.

Audit (or Practice Review) Process. This type of review process carries two different interpretations in the professional regulatory body world. In the health care context, a practice review entails a practice visit, the intent of which is to review an individual's professional practice to determine whether the individual is performing in a competent manner, and meeting the practice standards established by that profession. The health professions interviewed (APA, ADHA, AASW, CPS) all had some audit or

review process in place. APEGGA also had a similar program in place, to evaluate the practice of an individual member.

In one of the non-health professions which participated in this study (AICA [Alberta Institute of Chartered Accountants]), a practice review involved an on-site review of the practice of a group of practitioners. The intent of the review was similar to that found in the health professions--to determine whether performance standards were being met, but the focus was strictly on the practice, and was not intended to be on the individual. This organization did report, however, that the majority of its individual members do work in individual practices, therefore the practice review does result in individual assessment of practices in a large number of cases. In the remainder, the organization found that peer pressure within a practice would be exerted if a practice review resulted in deficiencies, or areas for improvement being found. Therefore, practice review would indirectly impact individual competence.

Licensure Examinations. This method of determining whether candidate members had surpassed professional standards is commonly used by professional regulatory bodies upon initial entry or certification. However, none of the groups interviewed utilized examinations to measure ongoing competence. Some associations indicated that an examination could be necessary should an individual practitioner let his/her practice lapse for an extended period of time, but re-certification exams were not seen outside of the literature.

Member Communication

Competence Program Implementation. Those regulatory bodies which had competence programs in place were questioned about their insights into program

implementation. Successful program implementation was defined by member willingness to participate, perceived positive membership perception of the proposed program, relative lack of resistance by members to potential competence program implementation, and lack of complaints from members regarding the program, as well as an understanding on the part of members as to the rationale of the competence program. This understanding occurred both on a broad perspective--i.e., the college is mandated to protect the public, but also an understanding of the personal benefits of the program, in that individual professional practitioners were responsible for maintaining their levels of competence. A successful program implementation would ensure that members came away with this understanding, and also the positive benefits of such a program--provision of a "yardstick" against which they could measure their personal professional competence, ability to identify professional development needs, and to track professional development activities, then application back into their particular practice area.

Concepts Which Required Communication. Organizations which had implemented competence programs identified the following concepts that required communication to the membership:

- communication of the need for a competence program (why the program?)
- communication of a map of the program (what the program looks like)
- how the program would impact individual association members
- timelines and specific details regarding how and when the program would be implemented, and specific expectations on the part of members.

Consultation with Members. Attempts were made to involve members in program development wherever possible. One organization used focus groups to achieve

this, having members involved in competence mapping for their professional group. Another group asked members to pilot their competence program on a voluntary basis, feeding their results into a study which served to validate the particular mechanisms selected as elements of their program.

All of the groups which had programs in place or who were developing programs emphasized the importance of ongoing communication with members through mail-outs, newsletters, meetings, and presentations. One group established a telephone "hot-line" to enhance member accessibility to the association for the questions and concerns that were anticipated once their program was implemented.

These insights into program implementation, while not specifically elements of a competence program, are valuable lessons nonetheless for a professional regulatory body considering implementation of such a program, and therefore were considered to be an important piece to document.

Overall Approaches to Competence Programs

From the groups involved in this study, there appeared to be three overriding approaches to the ongoing competence issue. Within these approaches, various elements of competence assurance were addressed. These three philosophies or approaches were:

1. **Individual/Voluntary**: Individual members are assessed. Participation in program is voluntary.
2. **Individual/Mandatory**: Individual members are assessed. Participation in program is mandatory.

3. **Group/Mandatory**: Professional regulatory body assesses competence level of a group of individual practitioners, or a practice. This can indirectly monitor individual competence. Participation in this program is mandatory.

As a further quality assurance measure, professional regulatory bodies were supplementing voluntary reporting systems with an additional allowance for association audits. At least two of the participants identified random and focused reviews/audits as being an important element of their program to ensure that members were complying with the intent of the program. These audits would consist of requesting additional, more in-depth information from specific members regarding certain aspects of their competence program activities. This was considered as an impetus to members to provide honest and consistent reporting in the ongoing competence program. This provided a means for the professional regulatory body to assure that all members were able to maintain competence (even those that the professional regulatory body may have identified as "at risk"). This also provided an opportunity for regulatory bodies to provide member education--to ensure that members understood and accepted the philosophy of the program.

Summary of Findings

Although professional regulatory bodies tend to approach the competence question from diverse perspectives and with various philosophical approaches, there are several mechanisms which are basic to ongoing professional competence frameworks. These include (a) professional development reporting, (b) self-assessment, (c) audit /practice review process, (d) client-driven assessment, and (e) peer review. These mechanisms are discussed in further detail in the next chapter, and are contrasted with the

adult education literature, in order that a framework for ongoing competence assurance might be synthesized which could be generalized for use in other professional groups such as dietetics.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS

Review

This study set out to address the problem of "how can ongoing professional competence be assured in dietetics?" Sub-problems identified included (a) what mechanisms are in place within the existing competence frameworks of professional regulatory bodies to evaluate ongoing professional competence, (b) what competence frameworks do professional regulatory bodies have in place to assure ongoing professional competence, and (c) how can competence frameworks and mechanisms in use by professional regulatory bodies be adapted to meet the needs of assuring ongoing professional competence of registered dietitians.

Discussion of Findings

Upon reviewing the literature, and the outcome of the interviews conducted in this study, one may observe that numerous mechanisms are being utilized to assure competence in the memberships of professional regulatory bodies. These include identification of practice standards and codes of ethics, recognition of continued versus initial competence, and provision of continuing education opportunities. In addition, mechanisms to assess ongoing professional competence included self assessment, professional development reporting, development of learning plans, peer review, client feedback, and audit/practice review. As discussed in the previous chapter, there exists support in the literature for each of these mechanisms. It is therefore recommended that these mechanisms be included in the proposed competence framework for registered dietitians in Alberta.

When developing a competence framework for a professional regulatory body, one must consider not only the essential components of that framework, but also the practicalities of implementation. These practical issues could include the potential cost of program implementation, particularly the expense for an association with a smaller membership; ease of administration of the program; and overall member acceptance.

As reported by those professional regulatory bodies which had implemented competence programs, member acceptance was enhanced by communication with members throughout the implementation process, and by consultation with members throughout the program planning process. This participation/communication observation can be supported by the literature. Support for this strategy can be found within both business and the adult education literature. Kotter & Schlesinger (1979; cited by Robbins, 1986, 459-260) identified six tactics for use by change agents in dealing with resistance to change: (1) education and communication, (2) participation, (3) facilitation and support, (4) negotiation, (5) manipulation and co-optation, and (6) coercion. Two of these tactics are evident in the findings of the current research study. Use of focus groups could be interpreted as participation. To quote Robbins, "it's difficult for individuals to resist a change decision in which they participate(d)." (p. 459). Education and communication were documented by two of the groups--this would help to assuage any resistance that would result from misinformation, and would provide the opportunity to strengthen understanding of proposed competence programs.

From the adult education perspective, we can look at the education and communication issue as the beginning to middle of a learning sequence for members of professional regulatory bodies. Wlodkowski (1991), within the time continuum model of

motivation, identified several motivational strategies that would enhance the individual's motivation to learn. These strategies would include positive confrontation of erroneous beliefs, expectations and assumptions that may underlie a negative learner attitude, and to make learner reaction and involvement essential parts of the learning process (p. 68). These elements can be seen in the communication strategies and focus group approaches utilized by the professional regulatory bodies within this study.

When assuring ongoing professional competence, theoretically, one could request that all members complete a re-certification examination on an annual or biennial basis. However, this proposal would likely be in conflict with all the practical issues listed above, so would not necessarily be realistic. This is also a controversial method of competence assurance.

The relative administrative ease in tracking continuing education reporting (i.e., number of hours, or points accumulated by members) lends popularity to this system. Its proponents also claim that mandatory continuing education reporting will assure competence, in that members are compelled to attend sessions. With increased demand for continuing education activities, potential providers of continuing education would then strive to provide programming that is relevant to the profession.

One could argue this rather simplistic view of mandatory continuing education. Particularly in recent times, with advancements in professional work and increasing specialization, it would be naïve to believe that "one size fits all" with respect to continuing education offerings. From this perspective, it is imperative that individual learning needs can be defined, and subsequently met. How better to accomplish this than have individuals define their own learning needs, then develop a plan to meet those

needs. Particularly in professions where there exists a large amount of diversity--the opportunity to specialize in a number of different areas--it would be difficult to provide generic continuing education sessions. This is not to say that there does not exist core professional knowledge from which the majority of members of a particular profession might benefit, but learning needs might not be met if reliance is solely on mandatory continuing education offerings.

I therefore support professional development reporting which reflects the relevance of continuing education activities, rather than the quantity of continuing education attended (quality versus quantity). This is a more difficult concept to track administratively than number of hours, or points, but is far more meaningful. Support for relevance in professional development activities can be found in the literature, particularly in the works of Benner (1982) who identified differing levels of competence, from novice to expert, with years in professional practice, and in Eraut (1994), who determined the dimensions of scope and quality within the concept of competence. Further, Yeaw's paradigm (1987) which outlined the relationship of construct (How did the learner learn?), content (what did the learner learn?), and consequence (what did the learner do with what he/she learned?) can help to highlight the necessity to go beyond simple reporting continuing education hours. Good examples of broader professional development reporting mechanisms are provided by professional bodies such as the Royal College of Physicians and Surgeons of Canada with their MOCOMP (Maintenance of Competence) program. MOCOMP asks members to report not only what activities they have been involved in, but what prompted their investigation into this particular

topic area, and what the outcome of their learning was on their practice. Pharmacists in Ontario have followed suit, advocating relevance of continuing education activities.

It is proposed that it is largely the role of the professional regulatory body to assist practitioners to identify and understand the growth areas in knowledge, and changes in practice standards within the profession on an ongoing basis. The individual practitioner, although he/she may be specializing in some "niche" area, has the responsibility to maintain overall general competence in all areas (this would reflect the unique knowledge of the profession). Mann (1996) suggested that learning be self-directed, but that measurement of professional competence was the responsibility of those who provide professional preparation (at entry into practice), and those who grant licenses to practitioners. This is supported by Houle (1980, p. 284), who suggested that "unevaluated participation" in continuing education activities, unrelated to performance, could carry no assurance of improvement. In the United States, the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), in outlining employer expectations, indicated that competence of all staff members be assessed, maintained, demonstrated, and improved continually. The JCAHO advocated ongoing inservice education and training programs to improve staff competence, and that all education and training be based on needs assessments (Puckett, 1997). Nowlen (1987) also agreed with this aspect, that "it is the individual professionals who are ultimately responsible for maintaining or enhancing their proficiencies and for integrating new skills" (p. 211).

Depending on the degree of specialization that is capable within a given profession, an individual might find himself/herself competent or expert within a very narrow sub-specialty, but not necessarily generally competent in all aspects/elements of

the profession . This in itself could present a dilemma for professional regulatory bodies, and requires attention. Competence of advanced level practitioners can be integrated in different ways by professional associations. For example, when discussing entry level competence versus that of the experienced practitioner, the AAROT group suggested that:

> The basics are always going to be there, after two or ten years. But after ten years, you would have to have greater abilities and competencies, greater knowledge, greater experience. Another complicating factor is that if you have been out practicing for ten years, and develop this one area of specialty, the baseline competencies have probably risen over those ten years because of changes in research and development in the profession. So this person may not be at the baseline of the current grad, although they have been practicing for ten years. This will be an issue when we look at people who want to switch practice areas.

Another view of the same issue was held by the AARN: "(We) believe that there is a core piece of competence that's there, or core competencies that are here upon entry, and those are continually built upon as a person progresses through their practice. So (practitioners) will develop additional competencies (so) that the underlying core (competence) should be stronger, but it should still be there." In this way, core competencies were viewed as those that can be transferred from one setting into another.

Both of these groups verbalized the dilemma of how to handle the "advanced practitioner". The framework which follows will attempt to address this dilemma as it considers the overall problem of assuring ongoing professional competence.

Conclusions

This study sought to answer the question of how continuing professional competence could be assured in dietetics. In answering this question, sub-problems were addressed, including (a) what mechanisms are in place within the existing competence

frameworks of professional regulatory bodies to evaluate ongoing professional competence, (b) what competence frameworks do professional regulatory bodies have in place to assure ongoing professional competence, and (c) how can competence frameworks and mechanisms in use by professional regulatory bodies be adapted to meet the needs of assuring ongoing professional competence of registered dietitians.

In addressing these questions, various competence frameworks were identified, and mechanisms with respect to these frameworks discussed and contrasted with and supported by the literature. The key mechanisms within these frameworks included professional development reporting, self assessment, use of learning portfolios, peer review, audit/practice review processes, and licensure examinations.

It has been mandated within proposed Alberta legislation that professional regulatory bodies will need to demonstrate ongoing member competence. The framework which follows could be adapted by various regulatory bodies to provide guidance in this regard.

Recommendations

The recommendations coming out of this study are two-fold:

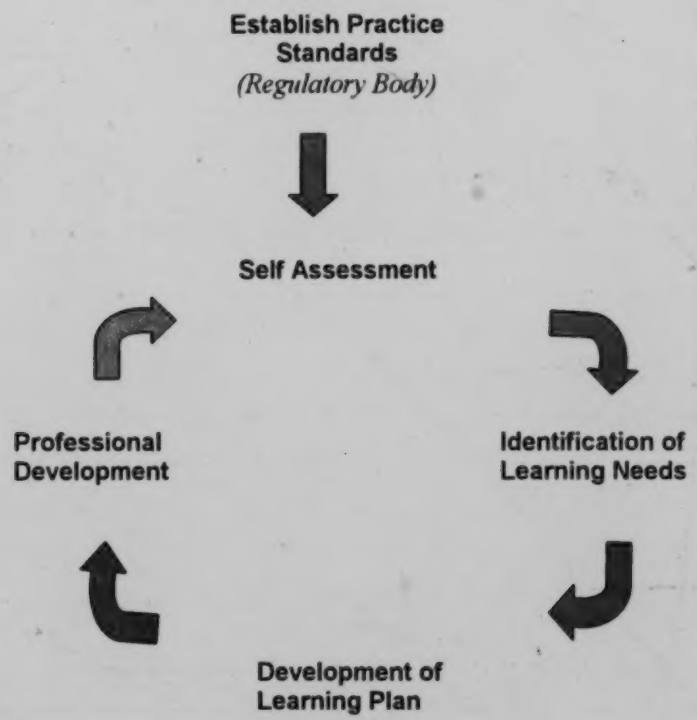
1. It is recommended that a competence assurance framework discussed here be adopted by the Alberta Registered Dietitians Association to assure ongoing professional competence of its members.
2. It is recommended that the competence assurance framework identified in the following text be implemented by the Alberta Registered Dietitians Association. Competence framework implementation has been mandated by the proposed Health

Professions Act, anticipated to be legislated by the Alberta government in the spring of 1999.

Recommended Framework Structure

Based on the findings of this study, and supported by the adult education literature, the following framework for assuring ongoing professional competence for registered dietitians is recommended for adoption and implementation by the Alberta Registered Dietitians Association.

Figure 1. Competence Assurance Cycle



The recommended competence assurance framework is summarized in the following components:

1. **Establishment of Practice Standards.** Practice standards and core competencies are established by the profession.
    - **Entrance to Professional Practice.** The individual practitioner gains entry to the profession. At this time, there is evidence that the individual meets practice standards (demonstrates minimum level competence). This might be demonstrated by specifying academic requirements, completion of a certification examination reflecting national standards, or other requirements as set forth by the professional regulatory body. Entrance to the profession would include credentialing by the professional regulatory body, entering practice, and commencing the journey on the competence continuum, starting at the beginner level.
2. **Self Assessment.** At predefined intervals (e.g., annually), the practitioner would evaluate his or her practice versus core practice standards/competencies which have been established by the professional regulatory body. This could include peer review as well as self assessment. The literature review did not reveal client feedback being used as a tool although this mechanism was in use and had been validated by one of the groups interviewed. Peer review, while not broadly practiced in the study sample isolated in this work, does have its merits, and is supported by the literature (Houle, 1980). Again, only one group had implemented the peer review process, and had found it to be a valid means of practitioner assessment. This might be a mechanism

for further consideration, once professions which are currently in the developmental stages of their competence programs have developed to a greater maturity.

3. **Identification of Learning Needs.** The individual practitioner identifies learning needs based on self assessment.
4. **Development of a Learning Plan.** The individual practitioner develops a learning plan to meet previously identified learning needs (could include mentoring as part of increasing knowledge/skills). Self assessment and development of a learning plan as a component of a competence program is supported by the adult education literature. Self assessment allows for learners to plan their own learning experiences, providing them with control over their learning. This important principle is cited time and again by Malcolm Knowles (1980) and has been demonstrated to be a valid and reliable method of developing self-efficacy measures (Murdock & Neafsey, 1995). These elements have also been widely reported by professional regulatory bodies outside of this study. For example, the College of Occupational Therapists of Ontario, and nurses in British Columbia and Ontario, among others, have implemented self assessment tools which identify individual learning needs.
5. **Professional Development Activities.** The individual practitioner implements their learning plan, based on needs identified from the self assessment, and would maintain a log of professional development activities through use of a learning portfolio. The use of learning portfolios, as described in the literature, supplements traditional continuing education reporting both from the perspective of identification of learning needs and in fine tuning professional learning to these previously identified learning needs, ensuring that continuing activities are relevant.

6. **Self Assessment (revisited).** The individual practitioner reassesses their learning (professional development) needs by:

   - assessing their learning plan at end of the cycle--were objectives met? Did learning needs shift due to a change in practice?
   - reassessing self versus core practice standards

This cycle should be repeated on a regular basis. As member competence increases along the continuum, a range of different learning needs will be identified. The proposed competence framework outlined here is derived from the research findings--components and mechanisms supporting competence assessment frameworks of professional regulatory bodies participating in the study, as well as findings in the literature.

Relationship to Research Study Findings. The proposed competence assurance framework outlined previously incorporates several key mechanisms. These include: (a) self assessment, (b) development of a learning plan, (c) use of learning portfolios, and (d) professional development reporting. There is capacity to build in peer review as a further mechanism within this framework. This was also supported by the research findings, with three of the participating professional regulatory bodies reporting use of peer review as a competence assurance mechanism.

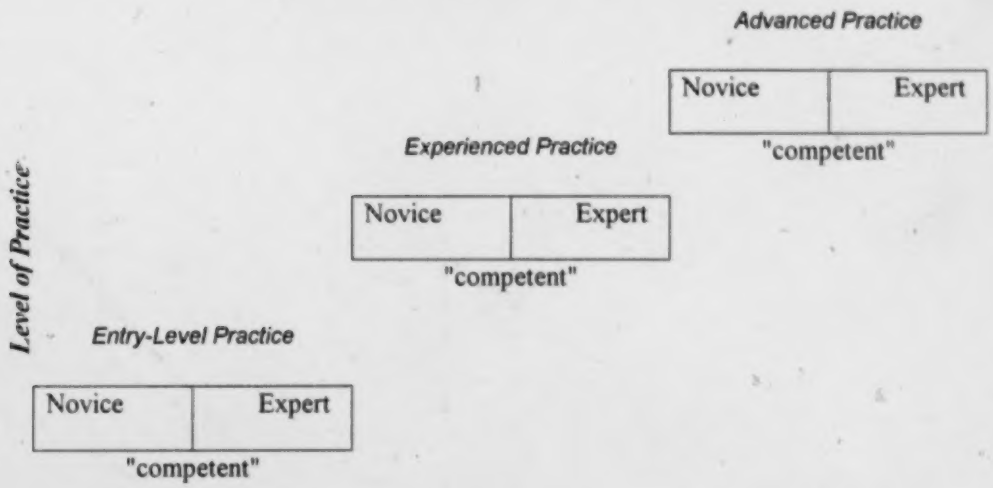
Relationship to the Adult Education Literature. This framework draws largely from the works of Chambers, Gilmore, O'Sullivan & Mitchell (1997), Benner (1982), and Houle (1980). Houle speaks greatly of professionalism, and how individuals operate within the context of a professional association, outlining what are their obligations and responsibilities as professionals regarding professional learning. Houle also identified a

learning "staircase" for the professional--how professional knowledge advances with practice. If the works of Benner, and the Chambers group, are overlaid with those of Houle, looking at the competence continuum, one can start to visualize more of a three dimensional structure. Within this structure, are the elements that I propose to incorporate into a competence framework to support ongoing competence.

Houle discussed the change in education required from pre-service to inservice, to support the changes in professional knowledge and skills with increased professional experience. Both Benner and the Chambers group discussed a competence continuum. Chambers et al.(1997) in particular held that "competence" occurs at some point along this continuum, somewhere between "novice" and "expert". Another interesting quote comes from Percival et al. (1994), who stated that "competence itself possesses a complexity that increases with experience and as responsibilities become more intricate". These concepts can be synthesized into the following possible structure. An entry-level practitioner will have a range of skills and abilities. Overall, this individual will be able to define themselves somewhere along the continuum of Novice → Expert (Novice/Beginner/Competent/Proficient/Expert). At some level (beyond "competent"), this individual would no longer be classified as being "entry level", but as an individual with "experienced practice". That is, they would have additional, broadened skills, past entry level. An entirely new continuum would be established at this level of practice. Expectations of "competent" of an experienced practitioner would certainly be at a higher level than of an entry-level practitioner. Once again, after a period of work experience (not defined), this same practitioner might eventually reach a level considered as "advanced practice", where he/she would practice high level advanced skills. Again, we

would envision a shift in the competence continuum. The definition of "competent" would most certainly fall at a more advanced level within this classification than was seen for the experienced practitioner, and for the entry-level practitioner. This concept described above might be illustrated as follows in Figure 2.

Figure 2. Competence Continuum Model



With the above model, the proposed competence assurance framework described earlier in this chapter could be applied by the individual practitioner. The above model demonstrates how the concept of "competence" could be uniquely defined for each individual practitioner. This model also captures Benner's concept (1982, p. 139) of the increased complexity of competence which occurs with experience, or years in practice. The overall proposed competence framework is supported further by the principles of adult education (andragogy) which are advocated by Knowles (1980). This framework assumes that the practitioner is self-directed in his/her learning, and in planning his/her

learning; that the practitioner wishes to apply learning to a practical setting, and that the practitioner will learn what he/she wishes to learn.

Recommended Framework Implementation

Based on the findings of this research study, it is recommended that the proposed competence assurance framework put forth here be implemented by the Alberta Registered Dietitians Association. In addressing the sub-problem of how components and mechanisms within the ongoing professional competence frameworks of other professional regulatory bodies could be adapted to meet the needs of registered dietitians, this study has demonstrated that similar components and mechanisms exist within a number of professional regulatory bodies. Therefore, these components and mechanisms should be adaptable to regulatory bodies such as the Alberta Registered Dietitians Association.

In addition, practical issues such as potential cost of program implementation, ease of program administration, and overall member acceptance were considered in framing these recommendations. These recommendations will result in a competence program that is cost effective and simple to administer, and which lends itself to implementation by a small association, as much of the work would be done by volunteer committees. Because these criteria have been met, and because the Alberta Registered Dietitians Association, as a professional regulatory body, is "committed to protecting the public by ensuring the competent practice of Registered Dietitians" (Alberta Registered Dietitians Association, 1997). It is recommended that this framework be considered for implementation by ARDA's competence committee.

This proposed framework holds significance for professional groups that are having to deal with the issue of ongoing competence of their members. Time will tell whether the framework recommended here will be effective in assuring ongoing member competence within a professional regulatory body.

It would be of interest to conduct further study in collaboration with a specific professional group to further refine the concepts of entry level practice, experienced practitioner, and advanced practice, and also to define more specifically competency profiles within each of these levels to provide indicators of competence (levels of achievement for novice→ expert) within each. This however, was beyond the scope of the current research study and will require investigation at a future date.

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Appendix A

Pilot Interview Schedule

1. Have they established standards of practice?
2. Is this a broad set of standards meant to cover all practitioners within their profession, or do they have standards of practice that are targeted specifically at various practice settings?
3. From standards of practice, have performance standards or performance expectations been established?
4. Is this relevant for this given profession?
5. Is this something that is done by:
   a) the workplace/employer?
   b) the professional association?
   c) the individual practitioner? (e.g. in private practice)
6. Are similar performance expectations utilized for the whole profession, or is there variation--by employer, by practice setting? Why or why not?
7. Have practice guidelines (or standards of care within medical/health care areas) been established?
   a) by profession?
   b) by practice setting?
   c) by individual?
8. From the above description of standards, what do you feel an individual practitioner must do in order to be considered competent?
9. How would this be different at initial entry into the profession, then at points several years later?

Appendix B

Finalized Interview Schedule

1. Has your profession established standards of practice?
2. Is this a broad set of standards meant to cover all practitioners within your profession, or do you have standards of practice that are targeted specifically at various practice settings?
3. From standards of practice, have performance standards or performance expectations been established?
4. Is this relevant for your profession?
5. Is this something that is done by:

   a) the workplace/employer?
   b) the professional association?
   c) the individual practitioner? (e.g. in private practice)

6. Are similar performance expectations utilized for the whole profession, or is there variation--by employer, by practice setting? Why or why not?
7. Have practice guidelines (or standards of care within medical/health care areas) been established?

   a) by the professional body?
   b) by practice setting/employer?
   c) by individual?

8. From the description of standards that you have been providing here, what do you feel an individual practitioner must do in order to be considered competent? Could you provide an example based on a specific standard or competency?
9. How frequently are members reviewed regarding their levels of competence?

10. How would this be different at initial entry into the profession, then at points several years later?
11. Is the entire membership reviewed on a regular basis? If not, how is a subset selected for review? What percentage of the membership would this represent? Would this subset be representative of the general membership?
12. What type of self-assessment processes (if any) have been established for use by your membership?
13. Could you comment on any client-driven assessment processes that are used in measurement of practitioner competence?
14. What type of continuing education system is supported by your organization? How does this tie in with ongoing competence measurement?
15. What is your perception of acceptance of the overall competence measurement system by your membership? Have you implemented any particular strategies to enhance communication or buy-in?

Appendix C

Letter of Intent to Professional Associations

Date

Dear :

This letter is in follow up to our recent telephone conversation. Thank you for agreeing to allow your association, (name of organization) to participate in this study. For purposes of a brief review, this research is in partial fulfillment of the requirements of my Master of Education (Adult & Higher Education) program in Educational Policy Studies at the University of Alberta. This study will be focusing on developing a framework with which to measure ongoing professional competence. Therefore, the majority of the questions that will be asked will be surrounding existing methods in place that your association is utilizing to assess professional competence.

While your organization's identity will be a matter of record for this study, the individuals who choose to participate will remain anonymous. These individuals may choose to opt out of the study at any time, and will be provided with a copy of interview transcripts to review for accuracy and intended meaning prior to analysis. After completion of the study, your organization will receive a summary of the survey results, if desired.

Should you have any further questions or concerns regarding this study, do not hesitate to contact either myself (work 492-4722/home 438-7332), or my thesis supervisor Professor Art Deane (492-4792).

Sincerely,

Holly Knight

Appendix D

Consent Form

I, _____, consent to participate in the research study "Measuring Ongoing Competence in the Dietetics Profession". I understand that this study is being conducted by Holly Knight, Department of Educational Policy Studies, Faculty of Education, University of Alberta.

In consenting to participate in this research, I understand the following:

- my anonymity will be maintained throughout this research;
- I will receive no remuneration in return for my participation;
- I will be provided with a summary of the survey results; and
- I may withdraw from the study at any time if I choose, with no penalty to myself.

Name of Participant (please print): _____

Signature of Participant: _____

Signature of Researcher: _____

Date: _____

Appendix E

Confirmation Letters to Participants

Date

Dear :

Thank you for agreeing to participate in the research study "Measuring Ongoing Competence in the Dietetics Profession". As discussed, interview questions have been enclosed for your information. I look forward to our meeting at (time) on (date) _____.

This study is intended to look at frameworks which self-regulating professional associations are using to measure ongoing competence of their memberships. This research is in partial fulfillment of the thesis requirements of my Master of Education (Adult and Higher Education) program.

In granting consent to participate in this study, your anonymity will be assured. Interviews will be audiotaped, and transcripts will be returned to you prior to analysis of the content so that you may verify the accuracy and content of your statements. In return for your participation in the study, a summary of the study results will be made available to you. You may withdraw from the study at any time if you so choose.

Should you require any additional information prior to our meeting, do not hesitate to contact either myself at 438-7332(home)/492-4722(work), or my thesis supervisor, Professor Art Deane at 492-4792.

Sincerely,

Holly Knight
Encl.